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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHEPELEV, KONSTANTIN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,934	LANGELAAR, GERRIT CORNELIS	
	Examiner	Art Unit	
	KONSTANTIN SHEPELEV	4133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/27/2005, 05/09/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to application filed on April 27, 2005 in which claims 1-16 are presented for examination.

Status of Claims

Claims 1-16 are pending; of which claims 1, 8, 10, 12, and 13 are in independent form. Claim 12 is rejected under 35 USC 112, Claims 10, 11, and 14-16 are rejected under 35 USC 101. Claims 1, 2, 4, 5-10, and 14 are rejected under 35 USC 102(b). Claims 3, 11-13, 15, and 16 are rejected under 35 USC 103(a).

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Watermarking of a variable bit-rate signal dependent upon bit rate of the information signal.

Claim Objections

2. Claims 6 and 12 are objected to because of the following informalities:

a. In claim 6 the word 'utilised' appears to be a misprint of the word 'utilized'.

b. In claim 12 the word 'analysing' appears to be a misprint of the word 'analyzing'.

Appropriate correction is required.

3. Claim 14 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits. Examiner has interpreted the claim as being dependent upon either claim 1 or claim 12 and has rejected it accordingly.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 10, 11, and 14-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claim 10, the applicant teaches "a watermarked information signal". As such, the claim is drawn to a form of energy. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter. Energy is not one of the four categories of invention and therefore claim 10 is non-statutory.

With respect to claim 11, it is rejected as being dependent upon rejected claim 10. Furthermore, in claim 11 the applicant teaches "a record carrier comprising a watermarked information signal." On page 9, lines 4-9 of the instant specification,

applicant has provided evidence that applicant intends the record carrier to include signals in the form of transmission medium including both wireless and wireline medium. As such, the claims are drawn to a form of energy. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter. Energy is not one of the four categories of invention and therefore claim 11 is non-statutory.

With respect to claim 14, the applicant teaches "a computer program" which is clearly a functional descriptive material, software, per se. When recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. However, the claim language lacks the necessary computer readable medium, and as such fails to fall within one of four statutory categories of invention according to 35 U.S.C. 101. Therefore, claim 14 is non-statutory.

With respect to claim 15, it is rejected as being dependent upon rejected claim 14. Furthermore, in claim 15 the applicant teaches "a record carrier comprising a computer program." On page 9, lines 4-9 of the instant specification, applicant has provided evidence that applicant intends the record carrier to include signals in the form of transmission medium including both wireless and wireline medium. As such, the

claims are drawn to a form of energy. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter. Energy is not one of the four categories of invention and therefore claim 15 is non-statutory.

With respect to claim 16, it is rejected as being dependent upon rejected claim 14.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5-10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Rao et al. (US 6,222,932 B1).

With respect to claim 1, Rao discloses the limitation of "embedding a watermark in an information signal" (column 4, lines 34-35) as an automatic image watermarking system.

Furthermore, Rao discloses the limitation of "the watermark embedding process is controlled by at least one embedding parameter, the value of the embedding parameter being dependent upon the bit-rate of the information signal" (column 3, lines

54-63) as the watermark strength is calculated based on the measured texture value and the set of parameters where the parameters are controlled by the texture value of the reference image. Since the parameters are controlled by the texture value and higher quality images have higher texture value examiner interprets texture value to be equal to bit-rate since higher bit-rate results in higher quality of each individual frame.

With respect to claim 2, Rao discloses the limitation of "determining the bit-rate of the information signal" (column 3, lines 60-61) measure a texture value of at least a portion of the image.

With respect to claim 4, Rao discloses the limitation of "the value of the embedding parameter is selected from a predetermined set of values in dependence upon the bit-rate of the information signal" (Fig. 1; column 5, lines 5-6) as a parameter database for determining the appropriate strength of the watermark.

With respect to claim 5, Rao discloses the limitation of "at least one of the robustness of the watermark signal and the observability of the watermark signal is dependent upon said embedding parameter" (column 3, lines 55-63) as calculating the watermark strength based on the measured texture value and the set of parameters associated with the measured texture value of the reference image.

With respect to claim 6, Rao discloses the limitation of "the value of the embedding parameter determines the watermarking technique utilised to embed the watermark in the information signal" (column 10, lines 7-12) as the DCT coefficients may be altered to a larger degree for an image with higher texture content as the watermark would be hidden better in the textural variations. Conversely, the DCT coefficients are only slightly altered for an image with lesser textural content. Rao specifies (column 3, lines 56-59) that the texture of the image defines the set of parameters used to determine strength of a watermark.

With respect to claim 7, it is rejected in view of the same reasons as stated in the rejection of claim 5.

With respect to claim 8, it is rejected in view of the same reasons as stated in the rejection of claim 1.

With respect to claim 9, it is rejected in view of the same reasons as stated in the rejection of claim 2.

With respect to claim 10, it is rejected in view of the same reasons as stated in the rejection of claim 1.

With respect to claim 14, it is rejected in view of the same reasons as stated in the rejection of claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1) in view of Ahn (US 2003/0031377 A1).

It is noted that Rao does not explicitly teach the limitation of "information indicative of the bit-rate is encoded in the information signal, the bit-rate being determined by decoding the information indicative of the bit-rate." However, Ahn discloses the abovementioned limitation (page 1, paragraph 0011) as extracting a decoded frame data and a compression data, where (page 1, paragraph 0012) the compression attribute information includes bit-rate information.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Ahn into the system of Rao to reduce the processing complexity by selectively performing post-processing only if necessary based on the compression attribute information.

5. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1).

With respect to claim 11, applicant teaches in the present specification that "a record carrier includes both machine readable medium and transmission medium" where 'transmission medium' is further defined as "both wireless and wire-line medium." Examiner takes an official notice that it is commonly known in the art to transmit the data via the wired as well as wireless networks.

With respect to claim 15, applicant teaches in the present specification that "a record carrier includes both machine readable medium and transmission medium" where 'machine readable medium' is further defined as "computer memory, a floppy disk, a compact disk or equivalent." Examiner takes an official notice that it is commonly known in the art to store information, including computer programs, on different forms of computer readable storage media.

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1) in view of Xu (US 2004/0059918 A1).

With respect to claim 12, it is noted that Rao does not explicitly teach the limitation of "analysing an information signal that may potentially comprise a watermark, so as to detect the watermark, the analyzing process being dependent upon the bit-rate of the information signal." However, Xu discloses abovementioned limitation (page 2, paragraph 0011) as dividing the watermarked audio into a plurality of frames,

determining magnitude of an autocorrelation of the embedded watermark's cepstrum at a location in each of the plurality of frames, and mapping a plurality of data bits of each frame into code that may be correlated with an original watermark.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Xu into the system of Rao to provide additional functionality of encoding digital watermark into an audio signal.

With respect to claim 13, it is rejected in view of the same reasons as stated in the rejection of claim 12.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1) in view of Smith (US 6,018,748).

It is noted that Rao does not teach the limitation of "making available for downloading a computer program." However, Smith discloses the abovementioned limitation (column 6, lines 4-5) as a web site having an application program available for download.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Smith into the system of Rao to simplify the distribution of the code by making it publicly available or download.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KONSTANTIN SHEPELEV whose telephone number is

(571)270-5213. The examiner can normally be reached on Mon - Thu 8:30 - 18:00, Fri 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Konstantin Shepelev/ 7/3/2008
Examiner, Art Unit 2131
/Ayaz R. Sheikh/
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